

**BEFORE THE
STATE CORPORATION COMMISSION
OF VIRGINIA**

Application of)	
)	
Verizon Virginia Inc.)	Case No. PUC-2007-_____
and)	
Verizon South Inc.)	
)	
For a Determination that Retail Services Are)	
Competitive and Deregulating and Detariffing)	
of the Same)	

**EASTERN SHORE (ES)
EXHIBITS**

PUBLIC VERSION

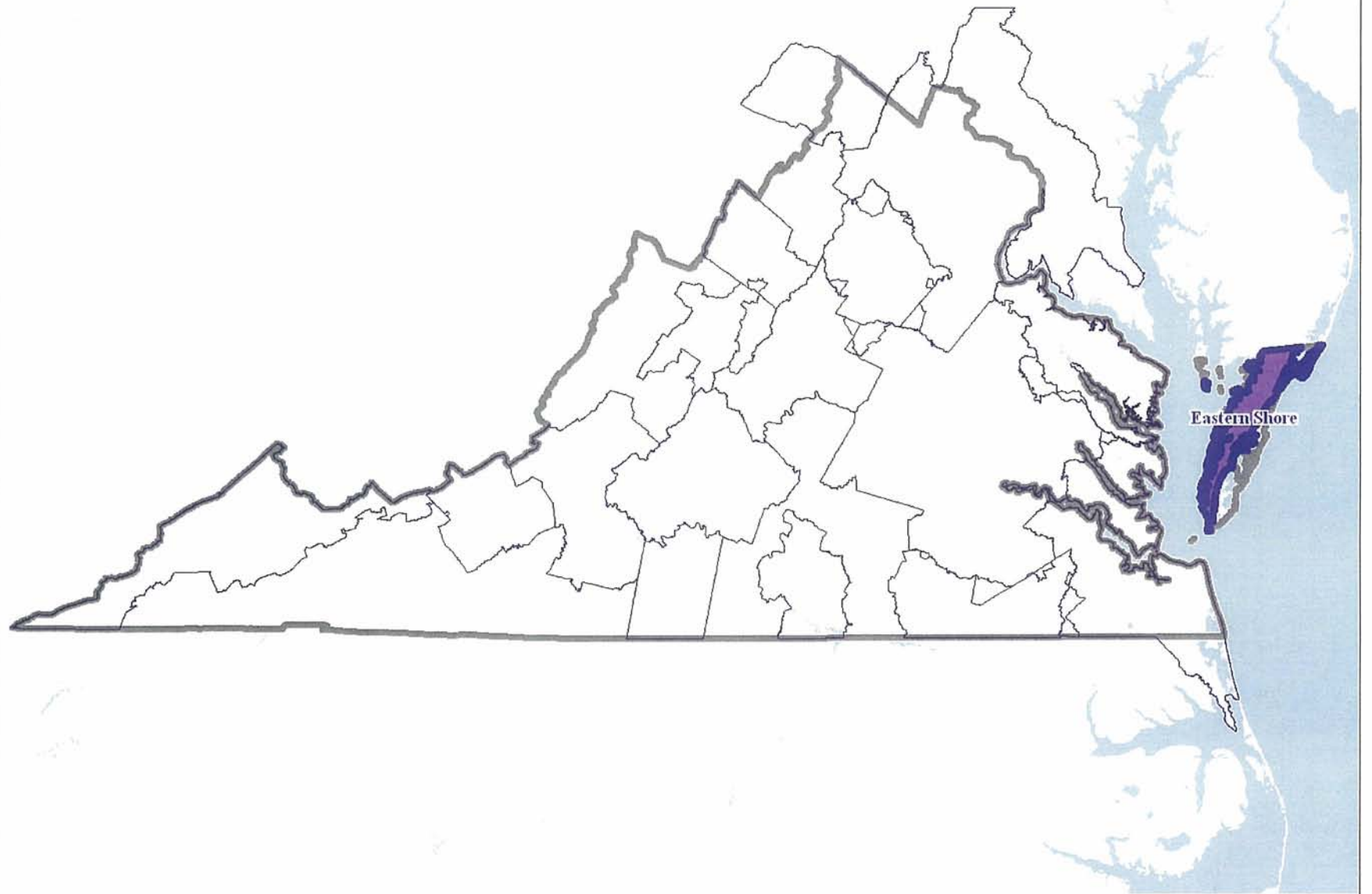
Eastern Shore (ES) Exhibits

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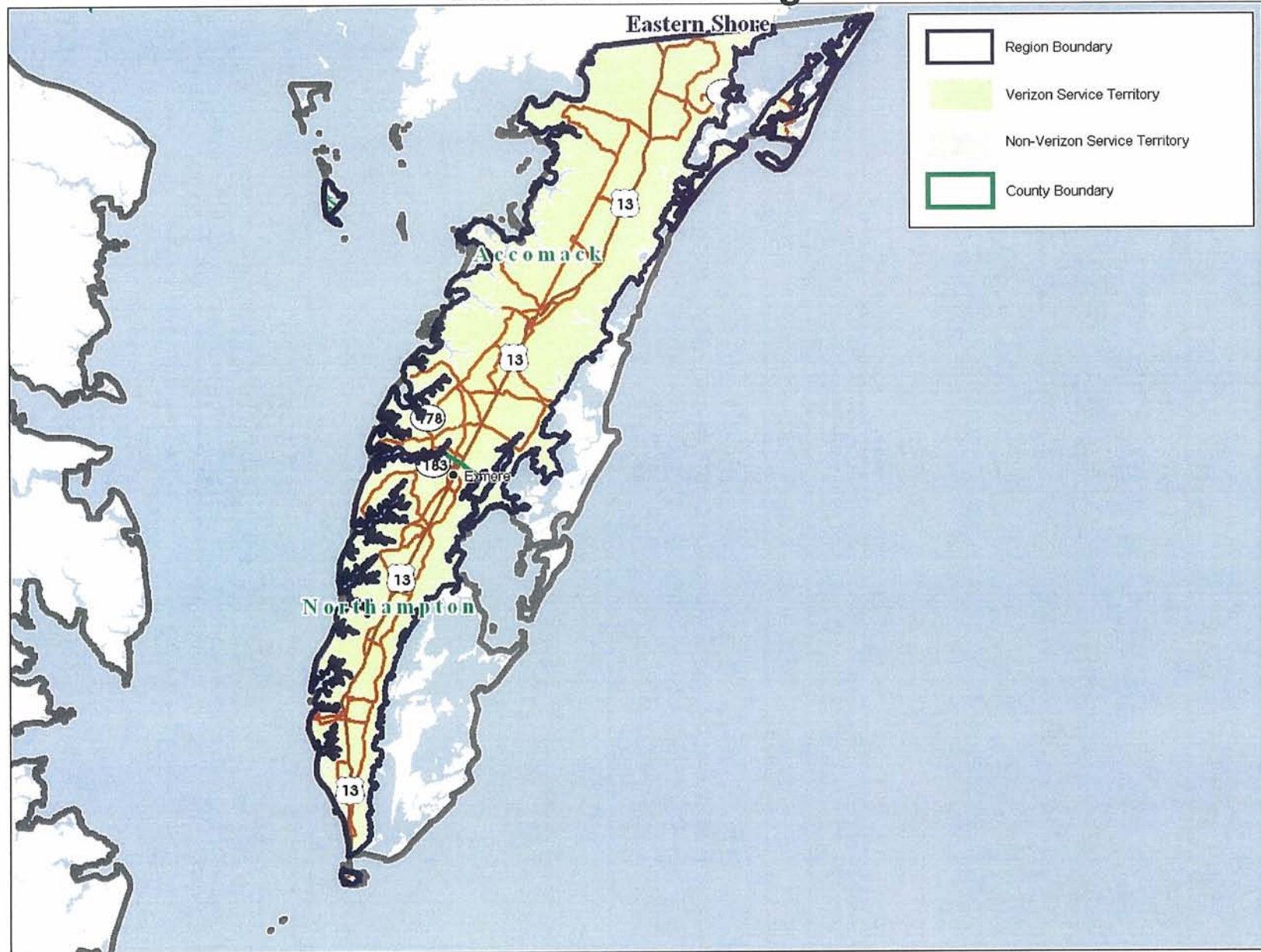
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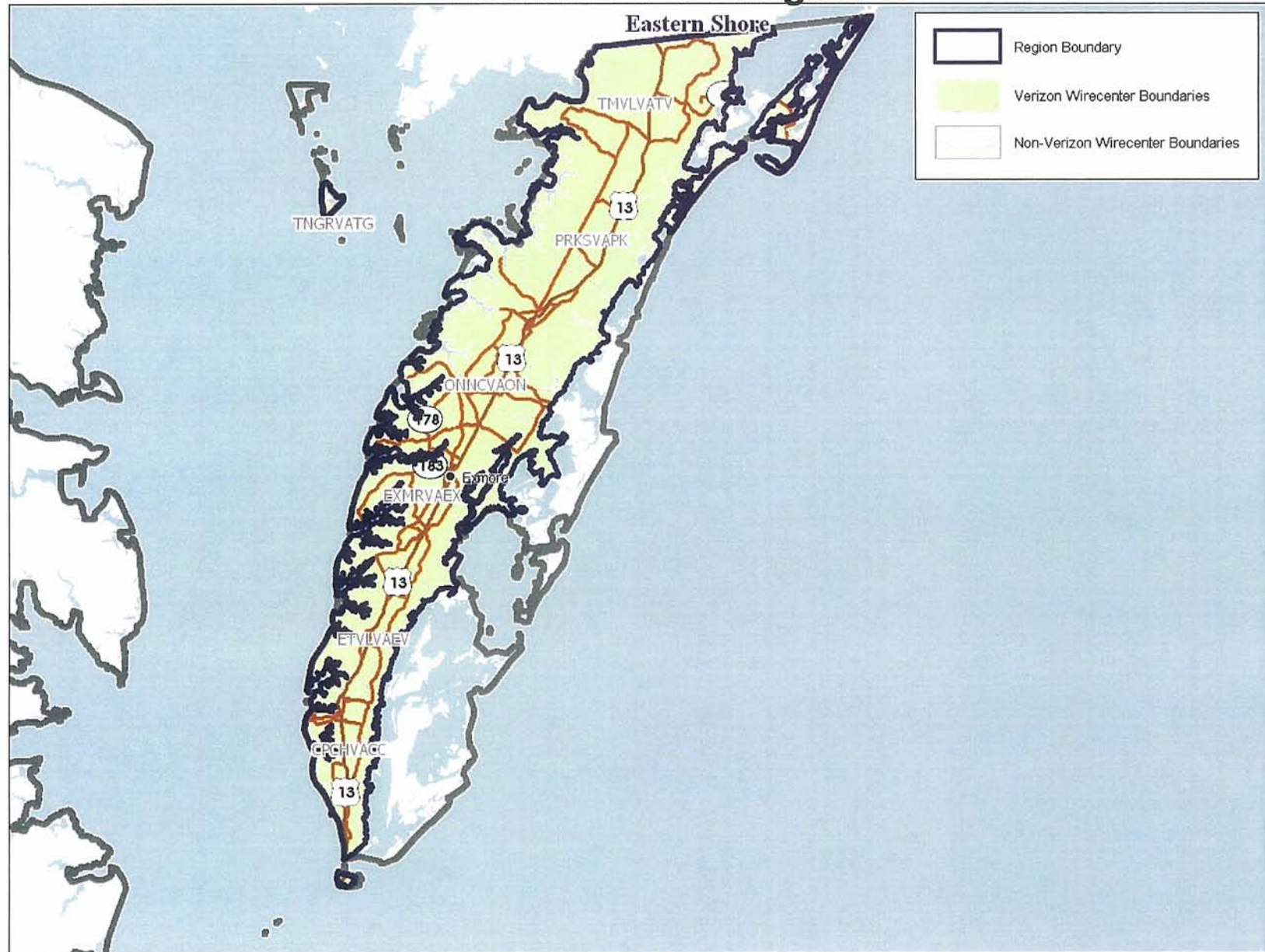
Eastern Shore Region



Eastern Shore Region



Eastern Shore Region



ES-2

**COMPETITION AND POTENTIAL COMPETITION
FOR RETAIL TELECOMMUNICATIONS SERVICES IN
VERIZON'S EASTERN SHORE REGION
SERVICE TERRITORY**

Report of Jeffrey A. Eisenach, Ph.D.
January 17, 2007

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I. OVERVIEW

Verizon's service territory in the Eastern Shore ("ES") region consists of 585 square miles, with a population of 39,352 living in 19,431 households as of 2006. Also as of 2006, there were 2,146 business establishments.¹ The average population density is 67 persons per square mile, and the median household income is \$36,578.² Verizon operates eight wire centers in the MSA.³

The ES region is located in the 757 area code. It is bordered on the north by Maryland, by the Chesapeake Bay on the west and by the Atlantic Ocean on the east. Route 13 bisects the region from north to south, and connects it to the Virginia Beach MSA via the Chesapeake Bay Bridge-Tunnel.⁴

The region is rural in character: its least densely populated wire centers, Cape Charles and Exmore, have 51 persons per square mile; the most densely populated is Chincoteague, with 103 persons per square mile.⁵ The Eastern Shore region also has a "high-tech" presence, including NASA's Wallops Island space launch facility.⁶

Given the rural nature of the region, it is not surprising that competition is not as far advanced as in more urban areas of the state. Nevertheless, competition for telecommunications services is present and growing in the Eastern Shore region. The evidence presented below shows that virtually all households and businesses have access to alternatives to BLETS and OLETS from traditional CLECs and from CMRS providers. **[BEGIN CONFIDENTIAL]**

[END]

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Mobile wireless coverage is ubiquitous, and mobile broadband services are available from Cingular as well as from Verizon Wireless. About one out of six people in the region consider their cell phone to be their primary telephone.

With respect to broadband, Charter offers cable modem service throughout its service territory, which includes 22.2 percent of the households in the Eastern Shore region.

There are no barriers to entry into the Eastern Shore region. Recently there has been significant entry, and more is expected. For example, as discussed below, Charter has announced plans to deploy cable telephony throughout their territory in the near future. In addition, **[BEGIN**

1. See Exhibit ES-4.

2. See *id.*

3. See Exhibit ES-3.

4. See Exhibit ES-1.

5. See Exhibit ES-4.

6. See NASA, Wallops Flight Facility, <http://www.wff.nasa.gov/> (last visited Nov. 28, 2006).

7. See Exhibit ES-14.

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[END CONFIDENTIAL] Plans are underway to expand the fiber infrastructure. Finally, existing providers could easily expand their offerings in the Eastern Shore region, including expanding their service footprints, at little or no cost. All of these factors demonstrate that the potential for additional competition is also an effective regulator of the prices of BLETS and OLETS.

The analysis below of the availability and usage of existing alternative services, and of the conditions associated with potential competition and new entry, demonstrates that a combination of existing and potential competition regulate the prices of Verizon's retail telephony services in the Eastern Shore region.

II. AVAILABILITY OF ALTERNATIVE SERVICES

All 19,431 households in the Eastern Shore region and all 2,146 businesses in the Eastern Shore region have the option to obtain alternatives to Verizon's BLETS, OLETS and Bundled Telephony services from competitive providers.

A. Traditional CLECs⁸

Traditional CLECs provide BLETS, OLETS and bundled services to both residential and business customers throughout the Eastern Shore region.

[BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]¹¹

In addition, all households and businesses in the Eastern Shore region can receive service from traditional CLECs through resale and/or Wholesale Advantage services available from Verizon.¹² As of March 2006, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

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8. Here and in the remaining sections of this report, unless otherwise indicated, "traditional CLEC" refers to CLECs other than cable companies. "CLEC" refers to both traditional CLECs and cable companies.
 9. See Exhibit ES-15 and Exhibit ES-17. The E911 data includes lines that are unable to be assigned to a wire center. These unassignable lines are included in the aggregate competition information. This leads to some under representation of E911 lines when broken out by wire center.
 10. See Exhibit ES-14.
 11. See Exhibit ES-4 and Exhibit ES-15.
 12. See Exhibit ES-16.
 13. See Exhibit ES-15.
 14. See Exhibit ES-15.

Altogether, [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]¹⁵

B. Cable Telephony

Charter Communications serves the Eastern Shore region, passing 22.5 percent of households.¹⁶ While Charter does not yet provide cable telephony in the region, its infrastructure is capable of providing cable telephony service, and the company has announced plans to deploy cable telephony in the very near future.¹⁷ In addition, Bay Creek Communications services Cape Charles, providing both cable television and cable modem service.¹⁸ Cable modem service is available for \$49.95 per month "a la carte," or \$39.95 for cable television subscribers. The company has announced that cable telephony service is "coming soon."¹⁹

C. Mobile Telephony

Of the 19,431 households in the Eastern Shore region, virtually 100 percent (all but 21) have access to at least one CMRS provider.²⁰ In addition to Verizon Wireless, there are two CMRS providers offering retail telephone services in the Eastern Shore region, Cingular and Sprint.²¹

As of 2006, there are 34 cellular towers in the Eastern Shore region.²² Of these, three have been constructed since 2004.²³ There is at least one cellular tower located in the area served by seven of the eight Verizon wire centers.²⁴

D. Broadband and VoIP

Increasingly, consumers are choosing to combine stand-alone broadband Internet access with VoIP services provided by "bring your own access" companies such as Vonage, thus creating their own bundles of broadband and retail telephony services. Both broadband and VoIP services are available to more than nine out of ten households and businesses in the region.

15. See Exhibit ES-14.

16. See Exhibit VA-10 and Exhibit ES-7.

17. See Comcast, FAQ, <https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804> (last visited Dec. 3, 2006); *id.* at <https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807> (last visited Dec. 3, 2006).

18. BayCreek Communications, <http://www.baycrk.com/index.asp> (last visited Nov. 28, 2006).

19. BayCreek Communications, Phone Services, <http://www.baycrk.com/phoneservices.asp> (last visited Nov. 28, 2006).

20. See Exhibit ES-12.

21. See Exhibit ES-11.

22. See Exhibit ES-10.

23. See *id.*

24. Compare Exhibits ES-3 and ES-10.

Cable Modem and DSL Service: Charter offers cable modem service throughout its service territories in the Eastern Shore region, serving 22.2 percent of all residences.²⁵ In addition, Verizon makes DSL service without voice available to retail customers for \$26.99 per month. DSL service is available to [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of all households.²⁶

Customers also have the option of purchasing alternatives to Verizon's BLETs, OLETs and Bundled Services from VoIP companies. VoIP providers that offer telephone numbers in the 757 area codes include at&t, Net2Phone, SunRocket, and Packet8.²⁷

E. Overall Availability of Alternative Platforms and Competitors

Looking overall at the availability of service from alternative platform providers (i.e., from mobile wireless, cable modem, DSL and facilities-based CLECs), 100 percent of all households in the Eastern Shore Region have service available from at least one alternative platform provider and 64 percent have service from two or more alternative platforms.²⁸

Similarly, looking overall at the availability of service from all competitors – i.e., the same measure as above, but counting each competitor separately (e.g., counting each CMRS provider separately), competition is even more extensive: 100 percent of households have competitive alternatives from at least two competitors, and 22 percent have access to service from five or more Verizon competitors.²⁹

III. USAGE OF ALTERNATIVE SERVICES

Verizon's internal data shows that at least [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of wireline telephone lines in the Eastern Shore region were being served by competitors as of March 2006. However, these figures understate the true market share of competitors, since they fail to account for intermodal competition from wireless and broadband.

Survey data indicates that [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL] of households subscribe to broadband. Taking intermodal competition into account, the data presented below show that Verizon voice lines now account for only 43.7 percent of all wireline telephony, wireless telephony and broadband connections in the region.

25. See Exhibit VA-10 and Exhibit ES-8.

26. See Exhibit VA-4.

27. See West Testimony at 81.

28. See Exhibit VA-4 and Exhibit ES-5.

29. See Exhibit VA-5 and Exhibit ES-6.

30. This figure does not include approximately six percent of the population (who by definition were not reached through Verizon's telephone survey) who have cut the cord altogether. See West Testimony at p. 63, n. 84

Time series data presented at the end of this section also shows that Verizon's wireline market share is falling, both in proportion to the number of wirelines served and relative to the number of households in the region. Taken together, the data presented in detail below demonstrates that the competitive alternatives described in Section II represent viable alternatives for Verizon's BLETS, OLETS and Bundled Services in the Eastern Shore region, since customers are actually switching to them in large numbers.

A. Traditional CLECs and Cable Telephony

As detailed in Exhibit ES-15, a total of [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]³

These figures are consistent with (if lower than) those indicated in the survey data presented by Mr. Newman, which show that [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of residential customers in the Eastern Shore region are using providers other than Verizon.³³ In rural areas (including the Eastern Shore region), the survey data show that 7.2 percent of POTS business customers and 10.1 percent of all business customers are using other providers.³⁴

Exhibit ES-15 also demonstrates that wireline competition is ubiquitous throughout the Eastern Shore region. It shows that competitors are actually serving both business and residential customers in [BEGIN CONFIDENTIAL] :

[END CONFIDENTIAL]

These data demonstrate that alternatives to Verizon's BLETS, OLETS and Bundled Services from wireline competitors are available to both residential and enterprise customers throughout the Eastern Shore region.

B. Mobile Telephony

The survey data presented by Mr. Newman shows that [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of households in the Eastern Shore region purchase telephone service from mobile telephone companies.³⁶ Moreover, [BEGIN CONFIDENTIAL]

31. See Exhibit ES-15.

32. See Exhibit ES-19.

33. See Exhibit VA-21. The survey results regarding presented by Mr. Newman also includes a very small number of customers who listed mobile wireless or VoIP providers as their telephone provider.

34. See Exhibit VA-20.

35. See Exhibit ES-15. The exception is the [BEGIN CONFIDENTIAL]

[END

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36. See Exhibit VA-21.

[END CONFIDENTIAL]³⁷

While Mr. Newman's testimony does not provide data on business usage of mobile telephones specifically for the Eastern Shore region, it does indicate that the proportion of businesses in rural regions (including the Eastern Shore region) which purchase mobile telephone service is 49.2 percent,³⁸ and that 12.7 percent of business respondents consider their mobile telephone to be their primary means of voice communication.³⁹

These figures do not include mobile telephone customers who have dropped their wireline service altogether, as these customers were not eligible for the telephone survey. As Mr. West's testimony indicates, national estimates suggest that approximately six percent of residential customers have "cut the cord."⁴⁰

These figures demonstrate that the mobile wireless alternatives available to consumers in the Eastern Shore region function as actual, viable alternatives to Verizon's BLETs, OLETs and Bundled Services.

C. Broadband and VoIP

The survey data presented by Mr. Newman show that [BEGIN CONFIDENTIAL]

[END
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These data are indicative of the low level of cable modem availability in the region, where only about 22 percent of households have cable modem coverage, compared to 61 percent of homes with DSL. Given the low level of cable modem availability, the data support the finding throughout the Commonwealth that cable modem service fares well when it faces off head to head against DSL, and suggest that the cable providers in the Eastern Shore region will be successful in winning away customers from Verizon when they launch their cable telephony service.

The survey data presented by Mr. Newman show that in rural areas in Virginia (including the Eastern Shore region), 48.5 percent of businesses subscribe to high-speed broadband service.⁴²

These overall usage rates for broadband demonstrate that the broadband plus VoIP "build your own bundle" option is available today to more than [BEGIN CONFIDENTIAL]

37. See *id.*

38. See Exhibit VA-20.

39. See *id.*

40. West Testimony at p. 63, n. 84.

41. See Exhibit VA-21.

42. See Exhibit VA-20.

[END CONFIDENTIAL] households and nearly half of all businesses, which already subscribe to broadband service.

D. Overall Penetration of Wireline and Intermodal Competition

While it is not possible to estimate precisely the number of lines Verizon has lost to wireline and intermodal competitors, it is clear that competition is having a significant impact on Verizon's market share, both in terms of wireline telephony and the overall markets for BLETs, OLETs and bundled services, and that wireline competitors are winning a growing proportion of customers. The data also indicate that intermodal competitors are winning a growing proportion of customers from wireline carriers of all types (i.e., including both Verizon and the traditional CLECs).

Both Verizon's line count and its wireline market share in the Eastern Shore region are falling. As indicated in Figure 1 below, between December 2003 and March 2006 (i.e., in 27 months), the ratio of Verizon lines to households fell from [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]⁴⁴

During this same 27-month period, the number of residential wirelines served by wireline CLECs rose by [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]⁴⁸

Figure 1 also demonstrates the significance of intermodal competition from wireless telephony and from broadband plus VoIP "build your own" bundles. It shows that the ratio of combined Verizon and CLEC residential lines to households fell from [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]⁴⁹ Assuming people have not stopped using voice telephony altogether, these data clearly indicate that wireless and broadband providers are competing effectively with both Verizon and other traditional wireline providers – a conclusion which is consistent with the high rate of wireless telephony usage and significant rate of broadband adoption discussed above.

43. See Exhibit ES-19.

44. See *id.*

45. See *id.*

46. See *id.*

47. See *id.*

48. See *id.*

49. See *id.*

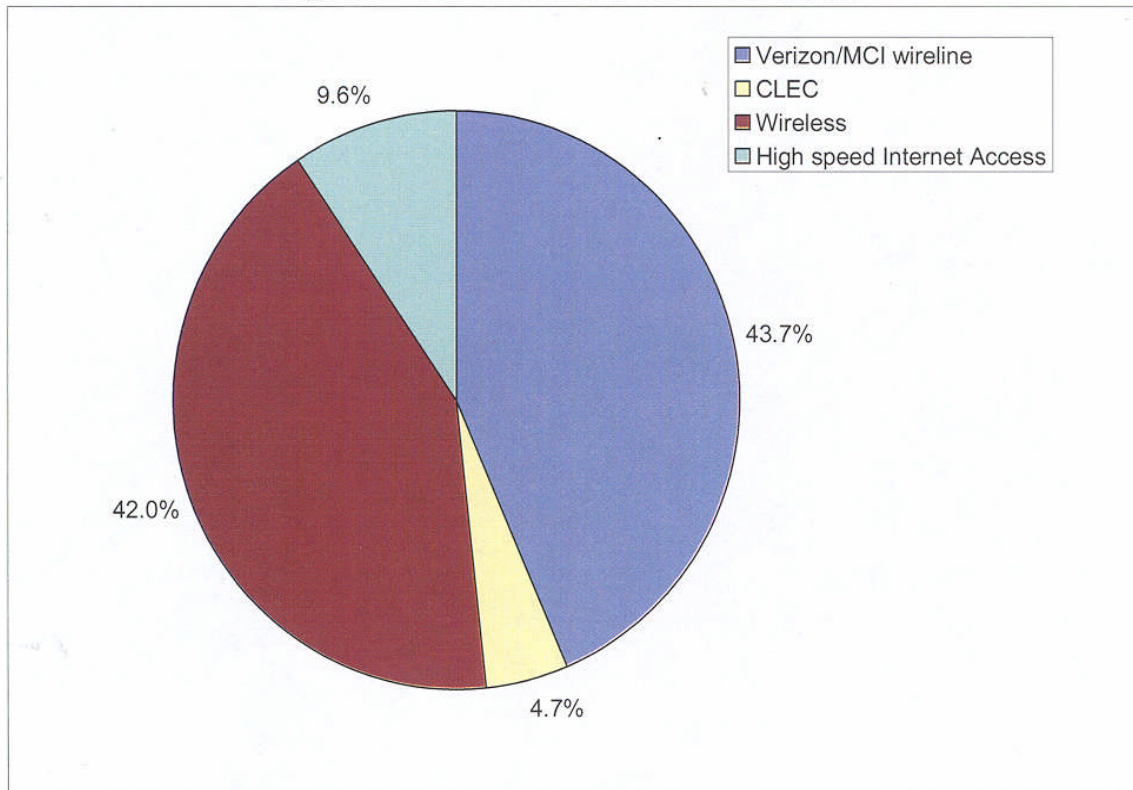
[BEGIN CONFIDENTIAL]

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Another perspective on Verizon's loss of overall share is shown in Figure 2 below, which shows the percentage of total connections – including wireline telephony, wireless telephony and broadband connections – served by Verizon voice lines, based on the survey conducted by Mr. Newman. As the figure shows, Verizon voice lines now account for only 40.1 percent of all wireline telephony, wireless telephony and broadband connections.⁵⁰

50. See Exhibit VA-22.

Figure 2: Verizon Share of Total Connections



IV. POTENTIAL COMPETITION AND ENTRY

Although competition from CLECs using resale and/or Wholesale Advantage services, from CMRS providers and from by-pass VoIP providers, though present, is at the early stages in the Eastern Shore region, the potential for additional competition is clearly present.

First, as noted above, Charter's cable infrastructure is fully upgraded and thus capable of supporting cable telephony service. The company is thus in a position to begin offering cable telephony services quickly and with little or no additional investment to more than one in five households in the region. Further, as noted above, the other cable provider in the region, Bay Creek Cable, has already announced plans to deploy cable telephony.

Facilities-based CLECs already operating in the region could also expand their operations quickly and with little or no additional investment. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]⁵¹ Furthermore, Cavalier operates a point of

51. See *id.*

presence in Salisbury, Maryland, just outside the region on Maryland's Eastern Shore.⁵² In general, as explained in Mr. West's testimony, CLEC switches are capable of serving customers at virtually any distance.⁵³

Non-facilities based companies, who provide services using resale and/or Wholesale Advantage services purchased from Verizon, are completely unconstrained in their ability to expand services. In the event of a price increase by Verizon, these companies could and would accommodate customers wishing to switch away from Verizon's services.

Wireless broadband is also being developed for the region. The Lower Shore Broadband Cooperative ("LSBC") is a public-private partnership created to bring high-speed internet access to rural areas across the "lower Eastern Shore of Maryland, Delaware and Virginia." LSBC has received funding from the U. S. Department of Agriculture, through a grant Agreement for Co-operations for Rural Cooperative Development Opportunities to the Rural Development Center, University of Maryland Eastern Shore, as well as a loan guarantee from the Rural Utilities Service ("RUS"). The LSBC web site reports that "installation of the primary antennas is well underway and early adopters are being scheduled for installation."⁵⁴

More broadly, barriers to entry in the Eastern Shore region are relatively low. The Eastern Shore has access to high-capacity fiber optic provided by Continental Visi.net, which has a point of presence in the region.⁵⁵ Moreover, in 2006, the Virginia legislature appropriated \$1.4 million to fund development of additional high-capacity fiber in the area,⁵⁶ matching well-developed efforts underway in Maryland to bring fiber to the northern (Maryland) portion of the Eastern Shore. The planned network will run from Maryland, down the Rt. 13 corridor and the NASA facility at Wallops Island, and across the Chesapeake Bay Bridge-Tunnel to Newport News.⁵⁷

The widespread presence of cell towers throughout the region (there are towers in seven of the eight wire center areas, and three new towers have been constructed since 2004) also means that the mobile and fixed wireless entry is also inexpensive. Finally, the entire Eastern Shore region consists of rural territories, which are thus potentially eligible for funding from the RUS and are already receiving support from other government entities.

V. CONCLUSION

Both residential and business consumers have multiple alternatives to Verizon's retail telephone services in the Eastern Shore region. Verizon is already losing customers to traditional CLECs and intermodal competitors, and this decline is taking place *at current prices*. Active

52. See <http://www.cavtel.com/wholesale/index.shtml>.

53. See West Testimony at Pg. 92.

54. Lower Shore Broadband Cooperative, <http://www.lsbcc.us/default.asp> (last visited Nov. 28, 2006).

55. See Eisenach Testimony at III.B. and Exhibit VA-18.

56. 2006 Acts of Assembly (Special Session I), c. 3 at item 104 (O)(1).

57. See, e.g., Maryland Technology Development Corporation, Broadband in Rural Maryland, <http://www.marylandtedco.org/broadbandinmd/index.cfm>; YANKEE GROUP, BRINGING AFFORDABLE BROADBAND TO MARYLAND'S EASTERN SHORE (2004), available at <http://www.midshore.org/reports/BroadbandAssess.doc>.

efforts are underway by numerous government entities to expand high-capacity fiber. If Verizon were to raise prices above competitive levels, it would both accelerate the rate at which it is losing customers to existing competitive services,⁵⁸ and increase the rate at which competitors and potential competitors deploy new services in the market. The availability of options already in the region, the announced intentions of actual competitors to expand their services, and the potential for additional competition are adequate to regulate the price of Verizon's retail telephone services in this region.

58. An analysis conducted by Mr. Taylor estimates that a decision by Verizon to raise prices by 5 percent in the Eastern Shore MSA would result in a *net* revenue loss of [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] annually. See Taylor Testimony, Table 14.

ES-3

Wire Centers by Rate Group, Exchange, City and County

REGION	LOC ST	WIRECENTER	LOCATION NAME	Rate Group	Exchange	CENTRAL OFFICE CITY	COUNTY
Eastern Shore	VA-E	CNCTVACT	CHINCOTEAGUE VA	03	CHINCOTEAGUE	CHINCOTEAGUE	Accomack
		CPCHVACC	CAPE CHARLES VA	08B	CAPE CHARLES	CAPE CHARLES	Northampton
		ETVLVAEV	EASTVILLE VA	05	EASTVILLE	EASTVILLE	Northampton
		EXMRVAEX	EXMORE VA	04	BELLE HAVEN	EXMORE	Northampton
		ONNCVAON	ONANCOCK VA	05	ONANCOCK	ONANCOCK	Accomack
		PRKSVAPK	PARKSLEY VA	04	PARKSLEY	PARKSLEY	Accomack
		TMVLVATV	TEMPERANCEVILLE VA	04	TEMPERANCEVILLE	TEMPERANCEVILLE	Accomack
		TNGRVATG	TANGIER ISLAND VA	03	TANGIER	TANGIER ISLAND	Accomack

ES-4

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Exhibit ES-4

ES-5

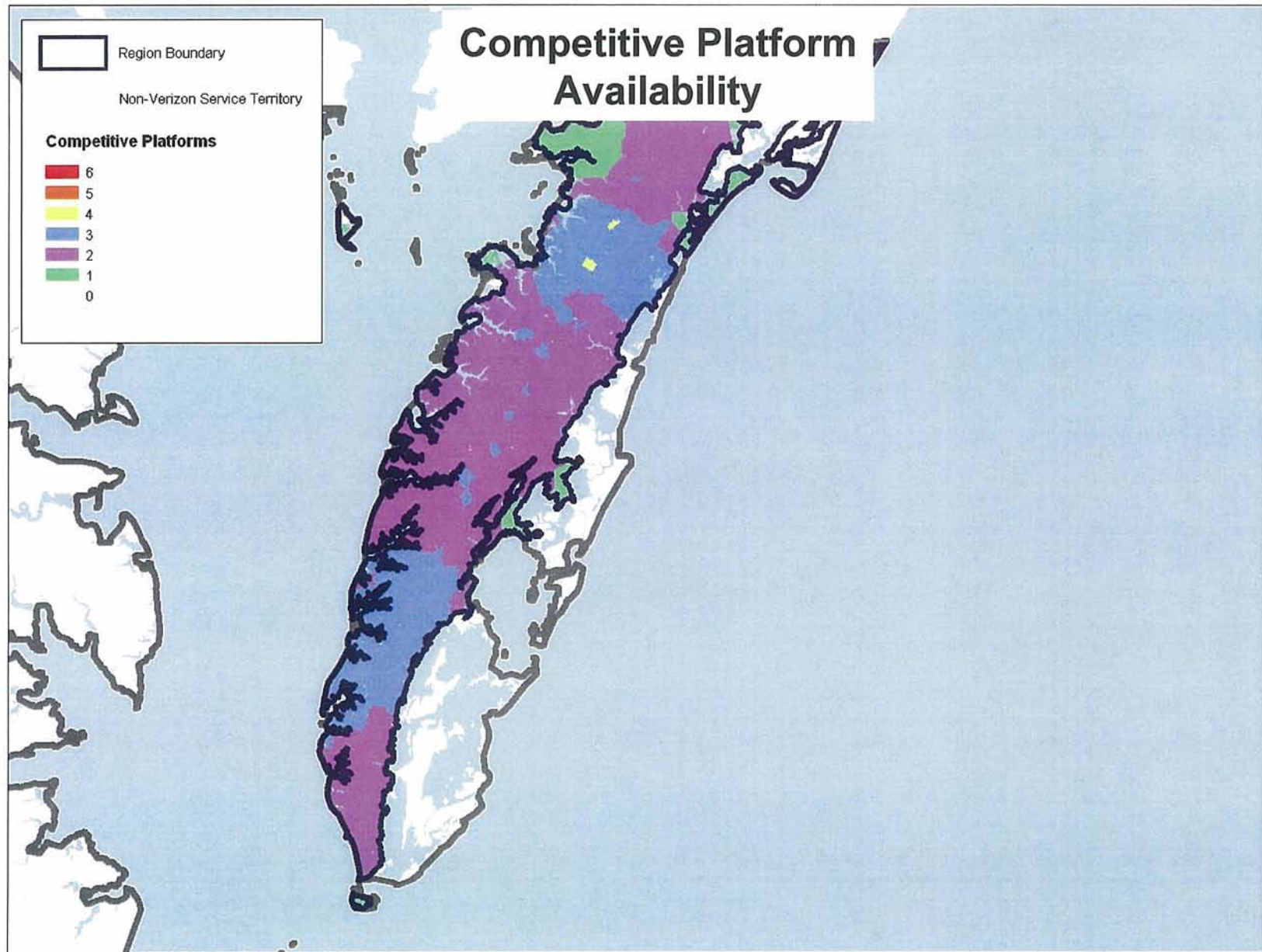


Exhibit ES-5

ES-6

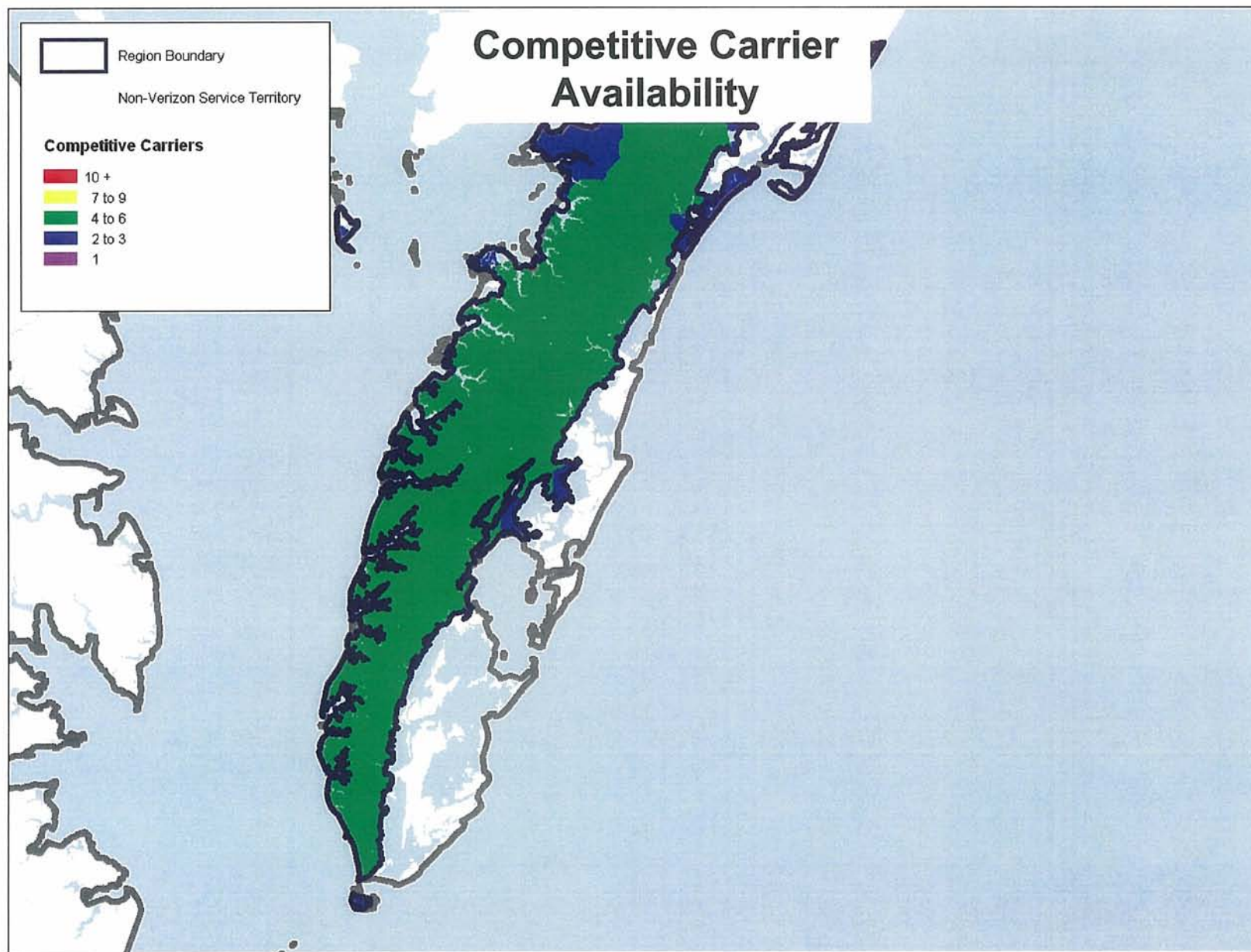


Exhibit ES-6

ES-7

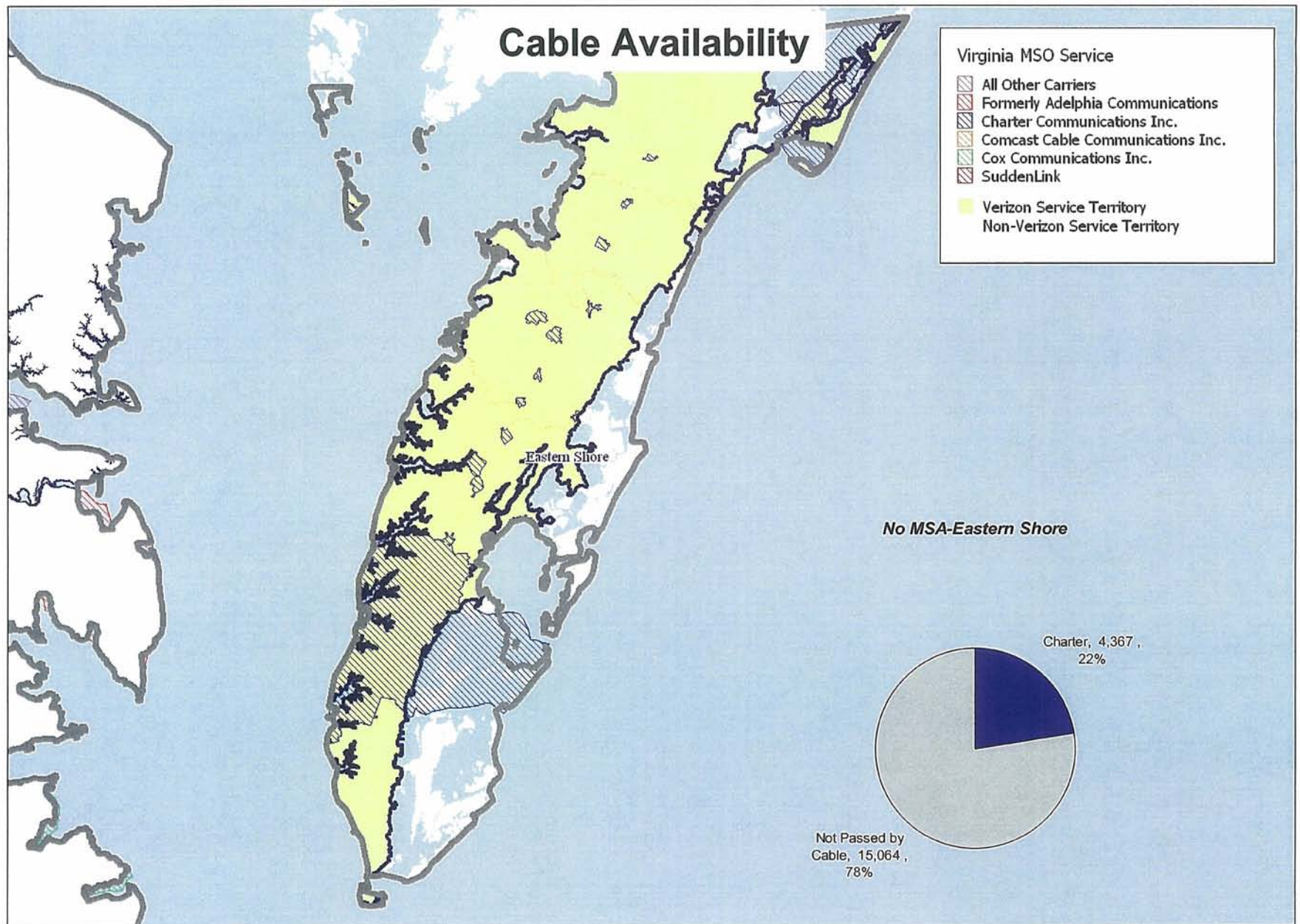


Exhibit ES-7

Note: HH numbers reflect only those households in Verizon's Service Territory

ES-8

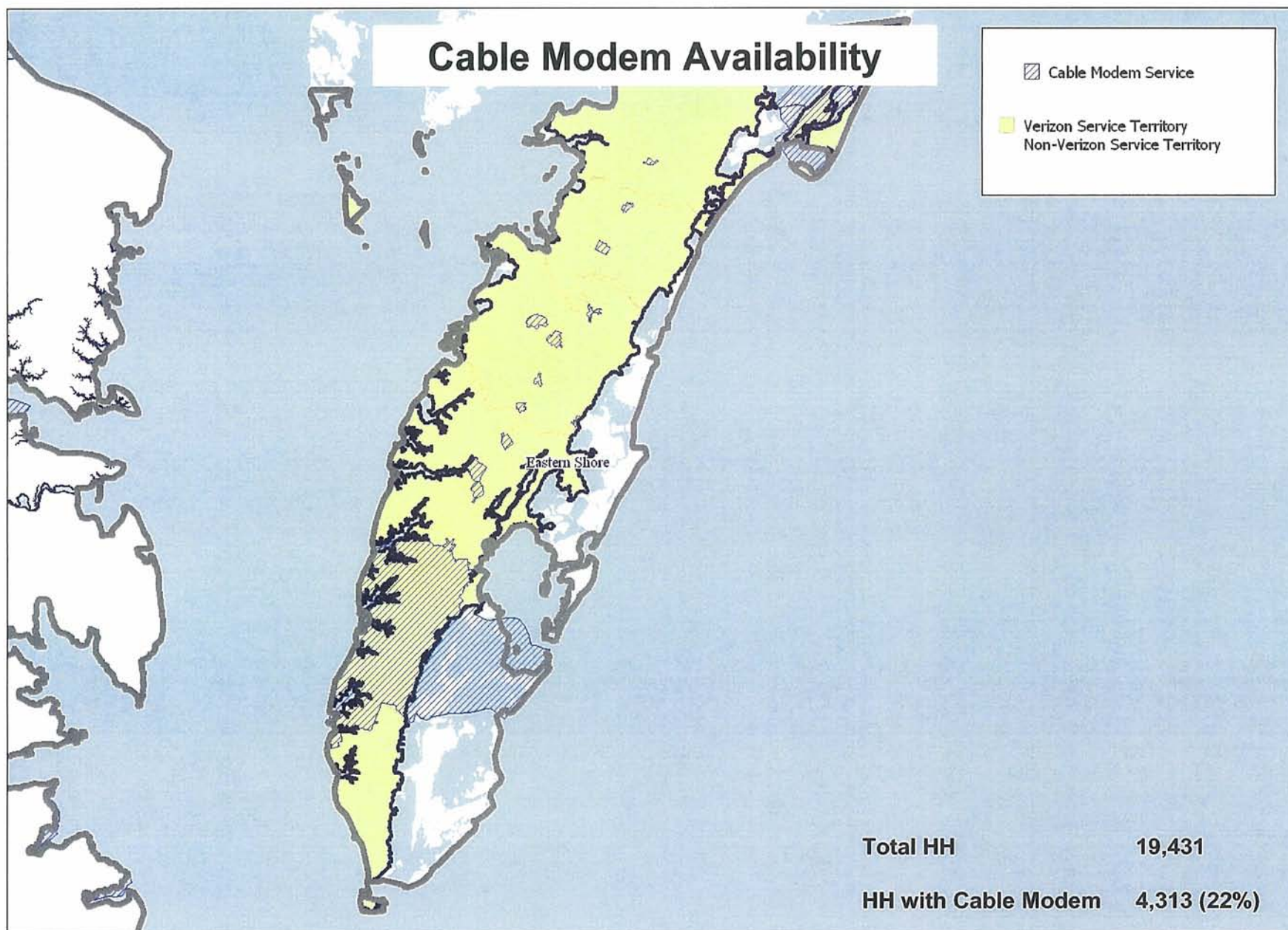


Exhibit ES-8

Note: HH numbers reflect only those households in Verizon's Service Territory

ES-9

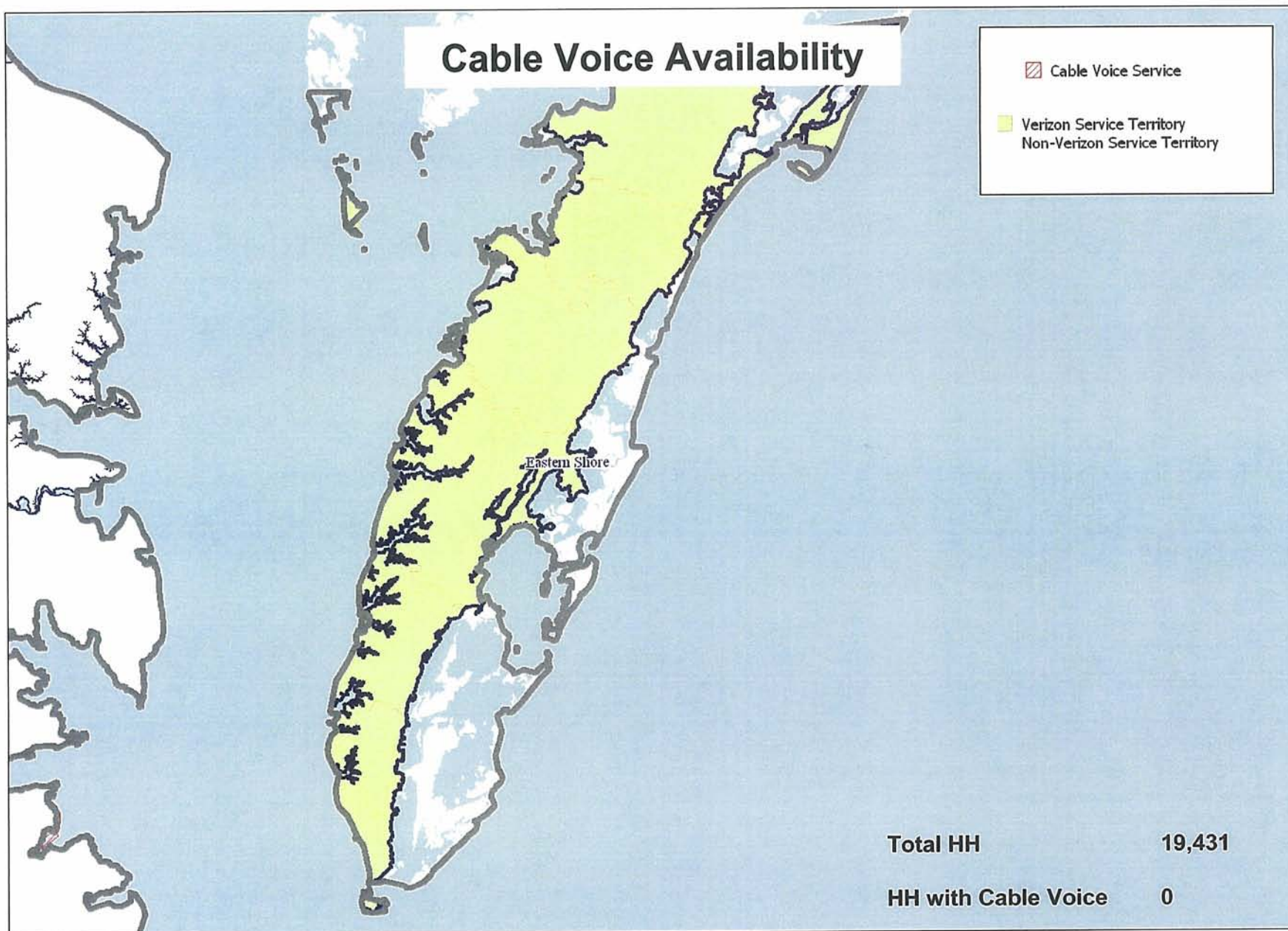


Exhibit ES-9

Note: HH numbers reflect only those households in Verizon's Service Territory

ES-10

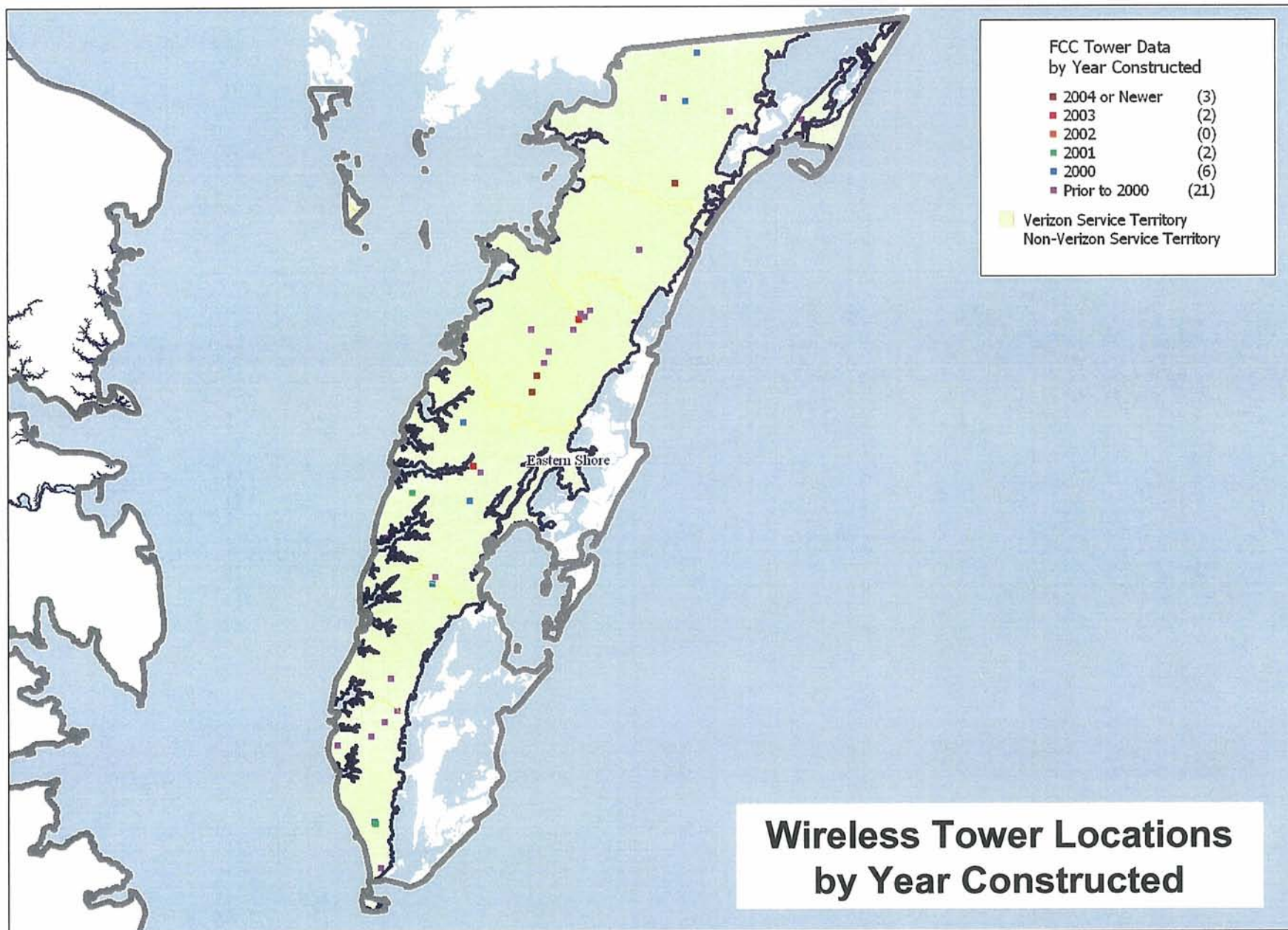
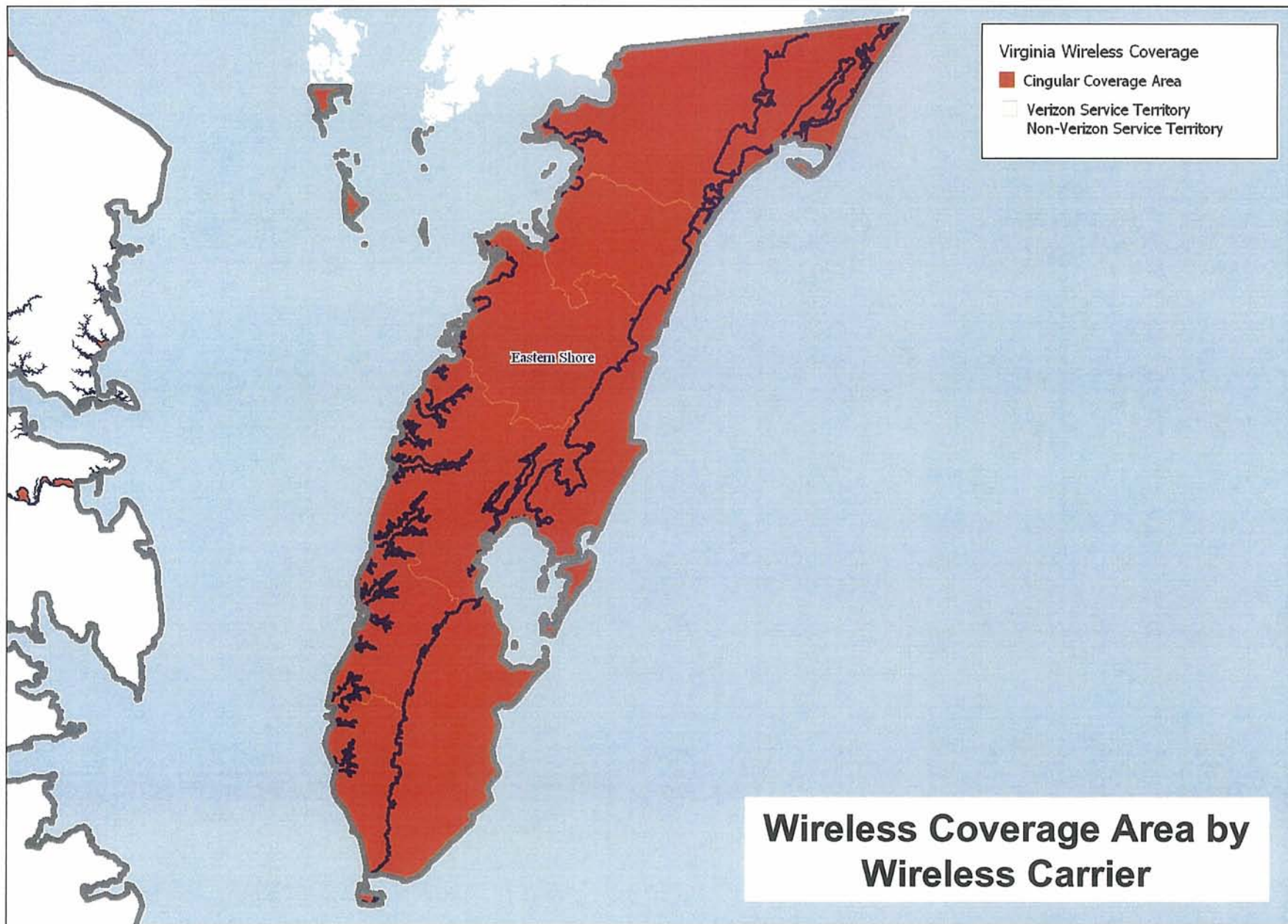
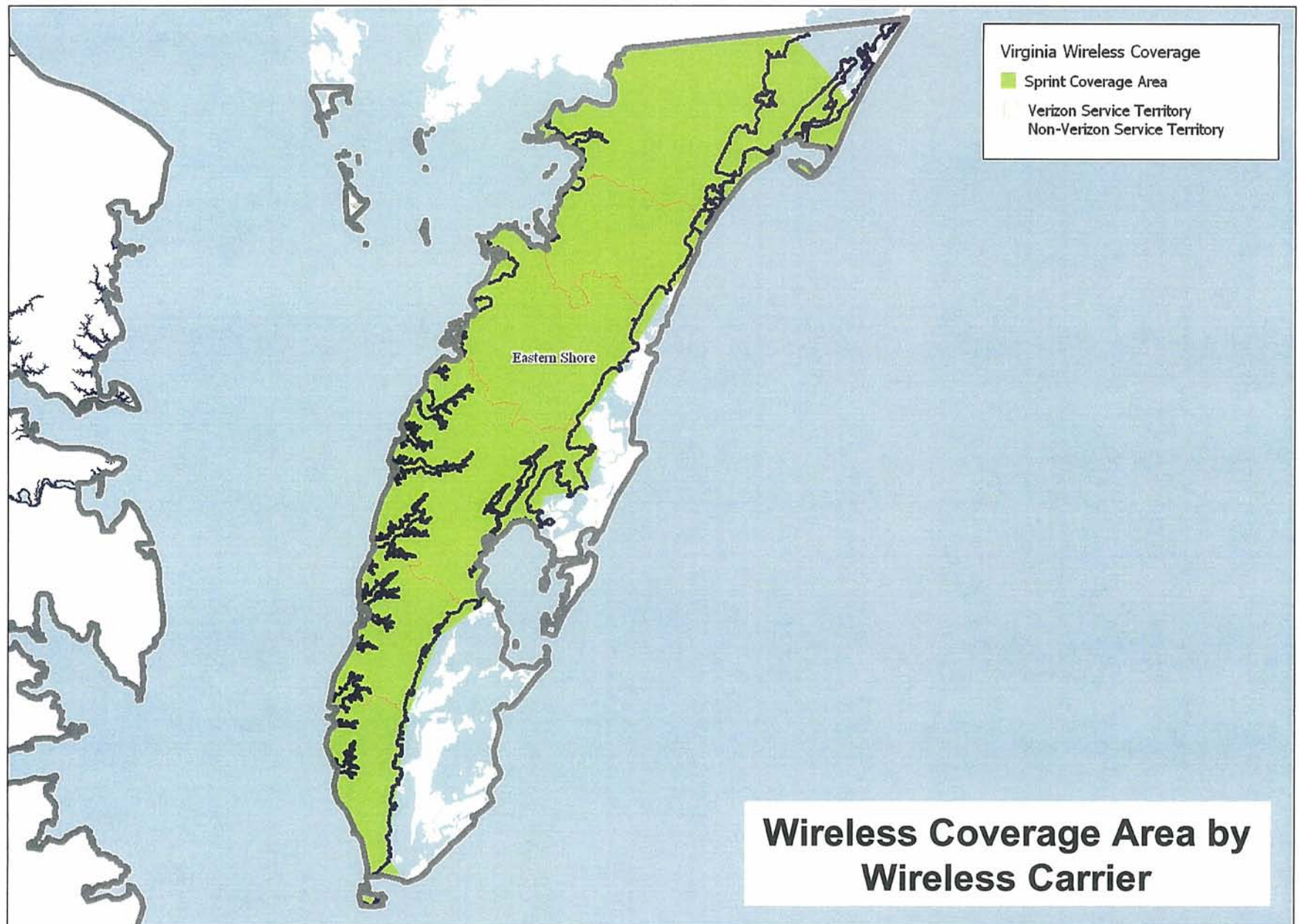
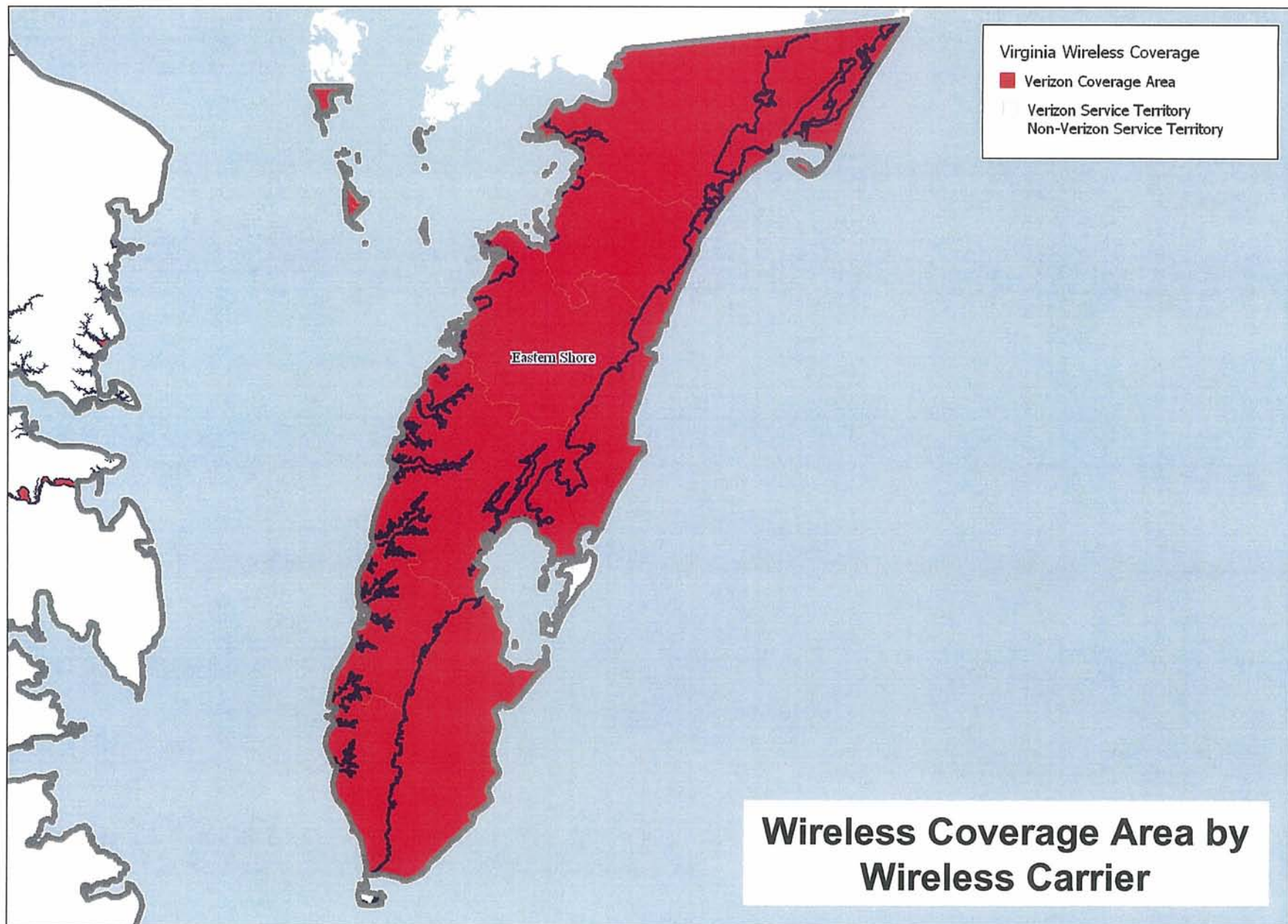


Exhibit ES-10

ES-11







ES-12

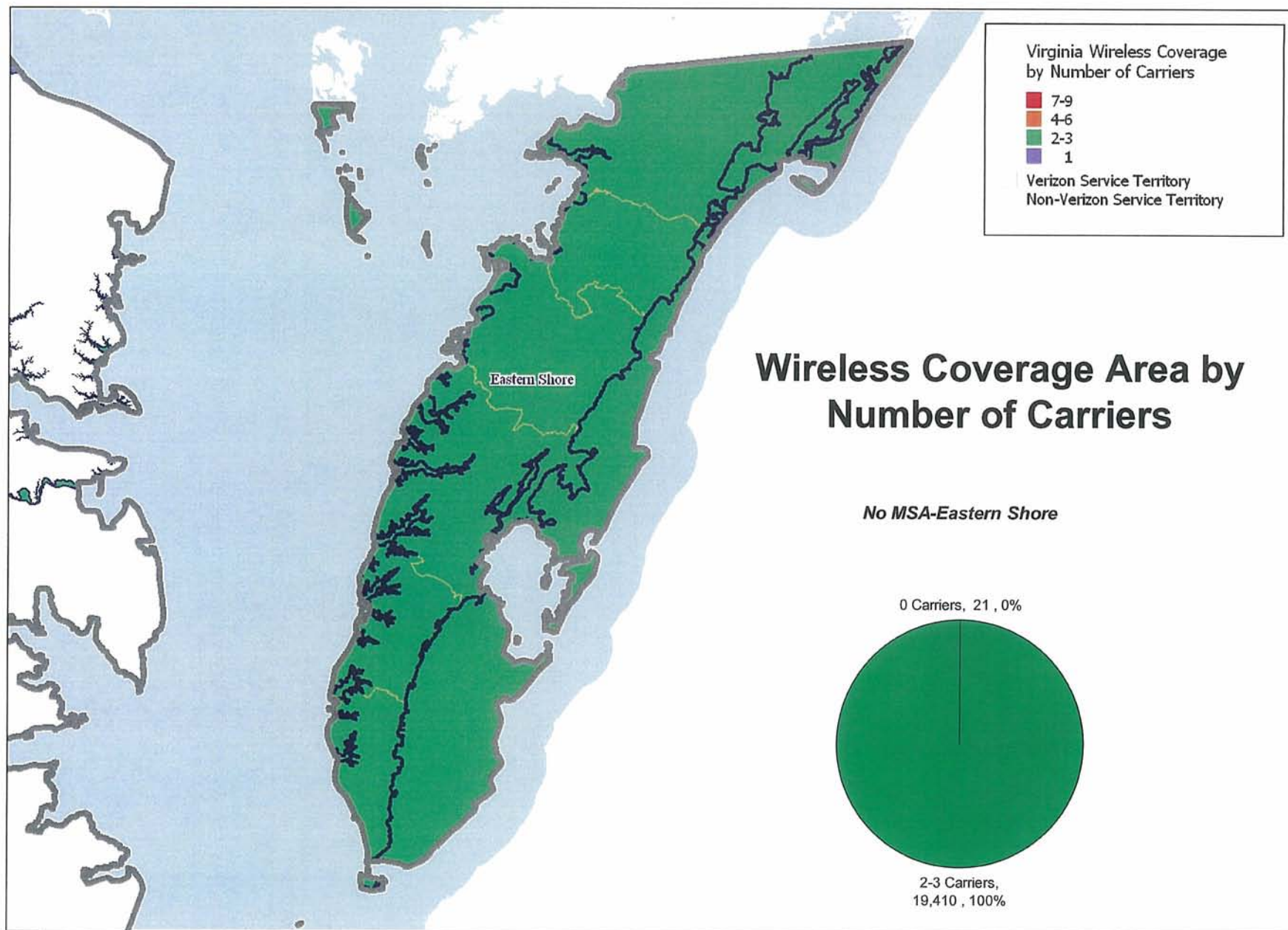


Exhibit ES-12

Note: HH numbers reflect only those households in Verizon's Service Territory

ES-13

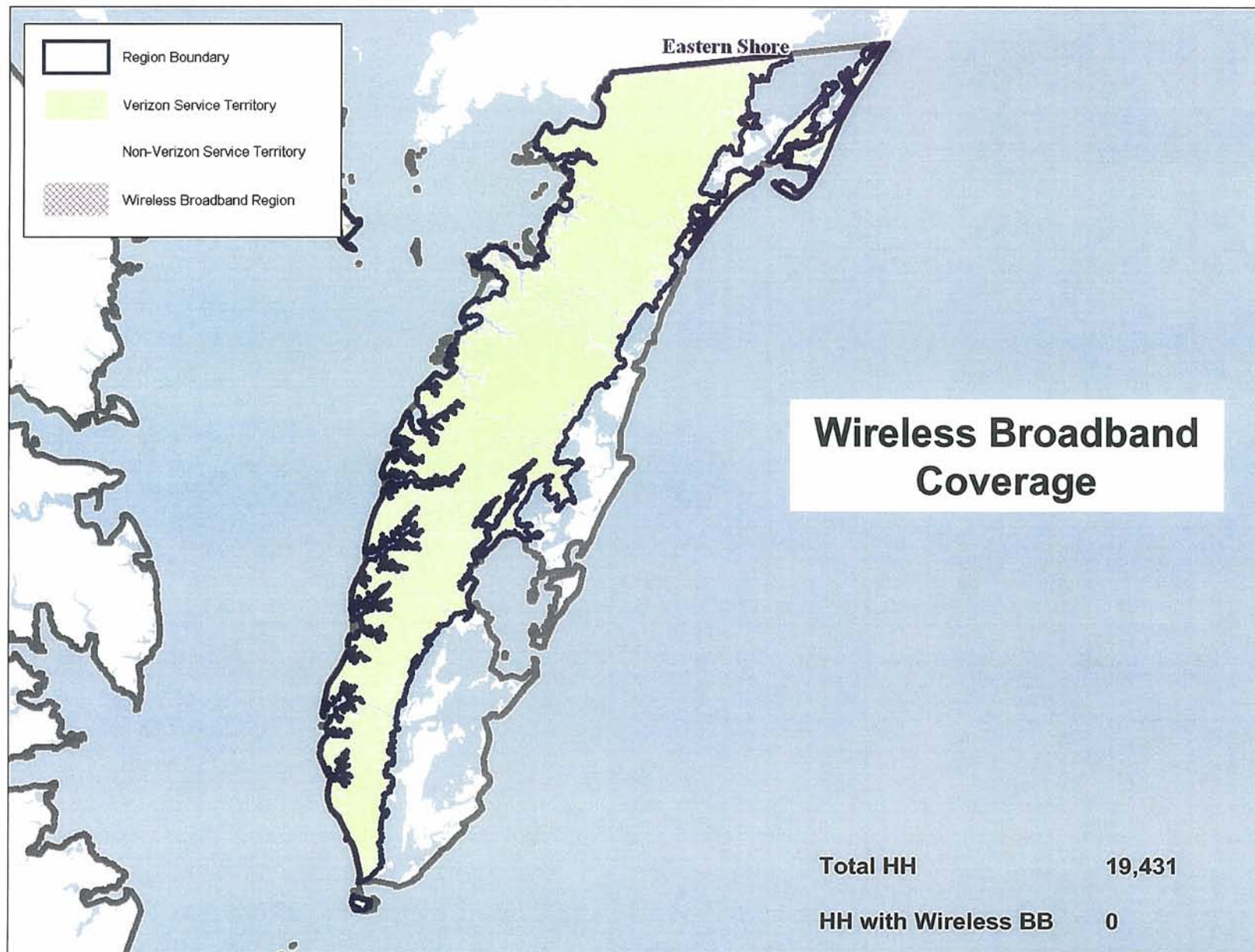


Exhibit ES-13

Note: HH numbers reflect only those households in Verizon's Service Territory

ES-14

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Exhibit ES-14

ES-15

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Exhibit ES-15

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